

Chapter 6. SUBCOMMITTEE POLICY REPORTS

The following section summarizes the findings of the six subcommittees of the Technical Advisory Committee. These subcommittees - Public Recreation in Natural and Sensitive Areas, Greenways and Trails, Water Resources, Urban Conservation and Public Recreation, Cultural and Historic Resources, and Wetlands - prepared detailed reports on natural resource and recreation issues and developed the policies and recommendations presented in this report. Summaries of the subcommittee reports, followed by policies and recommendations, are provided below.

Subcommittee on Public Recreation in Natural and Sensitive Areas

“Natural and sensitive areas” is a broad category of resources that encompasses many of the treasures that make Massachusetts a unique place to live and visit. For the purposes of the report, natural and sensitive areas contain a unique biological, geological or scenic feature, can be in public or private ownership, and are defined as:

- ◆ Resource areas that are predominantly in their natural state, including areas that are particularly sensitive to human impacts, such as rare species habitat; and
- ◆ Areas that have been altered by human activity but have come to be considered part of the natural landscape, such as agricultural lands.

1. Resource Protection on Public and Private Lands

The Natural and Sensitive Areas Subcommittee Report emphasized the need for a healthy resource base to maintain and improve outdoor recreation opportunities in Massachusetts. Because so many recreation activities occur within or depend upon natural areas, some of which are quite sensitive to human activity, the report stressed the importance of striking a balance between resource protection and recreation use.

A three-point plan is recommended to develop inventories and publication of inventory data, evaluate current and potential recreation uses, and redirect uses found to be incompatible with resources. These goals can be achieved through development of resource-based management plans, use of field observation, surveys and historical records, development of guidelines for recreation use, reallocation of uses over broader areas, and seasonal limitations on the acquisition of new sites.

2. Multiple Use of Land and Resources

Multiple use of land and resources is a worthy goal and a common characteristic of many recreation areas. When multiple use places heavy demand on a resource, however, an action plan must be in place to mitigate adverse impacts to the resource and avoid user conflicts. The compatibility between recreation uses and the recreation carrying capacity of multiple use resources should be evaluated. This evaluation can be accomplished by determining the range of recreation uses for a site, the extent of demand for each use and compatibility between these uses. It is important to remember that although certain uses may be compatible with one another, their cumulative impacts may be unacceptable.

3. Education

Managers and users of natural and sensitive areas can be grouped into three distinct categories: public land managers, private landowners, and recreation users. Education is the primary connection between the manager/landowner and the user and is a major tool for providing information about significant resources, management techniques and appropriate uses. An educated manager or landowner can more effectively manage resources and users and maintain recreation opportunities while still protecting natural resources. Private landowners can benefit from the expertise of professional land managers, and an educated recreation user will better understand the value of the resources and minimize their impact. Consequently, managers and landowners will spend less time supervising recreation users and resources will suffer fewer abuses.

It is recommended that a network of professional land managers and landowners be created to share expertise on management techniques and funding options, organize workshops among landowners and managers to share information, and use newsletters and electronic bulletin boards to disseminate information.

To further educate recreation users about the value and sensitivity of resources, materials should be developed such as guides to recreation opportunities, and outreach should be improved to friends groups, recreation users and other support groups.

4. Public Access

The subcommittee focused on three components of access: ensuring public safety, improving access to recreation resources, and encouraging expansion of the public use of private land. Public safety can be addressed by posting regulations, providing adequate on-site staff, and developing emergency response strategies. Recreation access can be addressed by designing resource-sensitive parking facilities, increasing promotional efforts, improving public transportation, and diversifying programming to meet the needs of a broader range of users.

Private landowners may be encouraged to open their land (e.g., Chapter 61 properties) to public access through education about liability issues and the tax incentives currently available to landowners who encourage public access. This educational process should involve organizations, such as land trusts, which have established relationships with private landowners.

6. Funding

Additional funding is critical to acquiring, maintaining and improving recreation opportunities in natural and sensitive areas. Public agencies depend on funds and annual appropriations to acquire new sites and maintain existing ones, and private organizations and landowners need to know what funding mechanisms are available to them, who is eligible, and how to apply.

Public agencies have different funding needs and would benefit most from consistent levels of yearly funding. Reliable funding would make it easier for agencies to develop long-range plans and might help eliminate inefficient year-end spending. Finally, public/private partnerships should be encouraged in acquisition strategies and site management.

Subcommittee on Greenways and Trails

Greenways are corridors of protected open space managed for conservation and recreation purposes. Greenways often follow natural features such as ridges or rivers or they may be abandoned infrastructure corridors such as railroad right-of-ways, town roads, logging roads, or historic barge canals. They link natural reserves, parks and cultural and historic sites with each other and with towns and cities. Trails are often components of greenways and therefore share many of the same characteristics. Trails can also be independent resources built for specific functions, such as transportation.

Greenways protect sensitive lands and wildlife, and provide access to recreation opportunities. Rural greenways preserve natural habitats and wildlife migration routes. They encourage the restoration of valuable landscapes, and provide recreation and education opportunities. Urban greenways encompass natural and built features and provide opportunities for conservation, recreation and transportation.

Massachusetts contains some of the best known greenways and trails in the country, each with its own distinct character. Frederick Law Olmsted's Emerald Necklace in Boston, the Minuteman Bike Trail, the Bay Circuit Trail, and the Charles River corridor in eastern Massachusetts, the Massachusetts portion of the Appalachian Trail, and the Connecticut River Greenway State Park in western Massachusetts, are just a few of the many greenways and trails across the Massachusetts landscape.

1. Planning, Design and Development

Today more people are using greenways and trails in Massachusetts in more ways than ever before. Popular new uses such as mountain biking, inline skating, fitness walking, snow shoeing, and trail running, as well as more traditional pursuits such as hiking and horseback riding, are attracting a large and diverse following onto the trails. To accommodate this increased demand, additional greenways and trails will be needed. To provide safe, high-quality recreation experiences, and to protect valuable resources, greenways and trails need to be carefully planned, thoughtfully designed, and strategically located.

The Greenways and Trails Subcommittee recommends that design and management policies should emphasize resource protection while accommodating multiple uses. This can be accomplished by identifying important resources within or near greenways and trail corridors, identifying the demand for different uses, and developing design and management guidelines based on these findings.

2. Funding and Protection Strategies

More than half of the state's documented greenways and trails are located on private property. They often link publicly owned open space, and without legal protection, these private lands will be lost to

development, thus isolating public properties. Greenways and trails are often thought of as components of open spaces rather than unique resources, and receive less attention in acquisition priority planning. The varied nature of resources that greenways and trails encompass make numerous creative development and protection strategies possible.

Less-than-fee acquisition strategies should be publicized and pursued whenever possible. These strategies include continued use of conservation restrictions and easements, and the Chapter 61, 61A and 61B tax relief programs provide for protection of forestry, agriculture and recreation resources through tax incentives. Less-than-fee strategies may also include working with state and local historic commissions to retain ancient ways, encouraging utilities to provide access to their right-of-ways, and reviewing road abandonment procedures to assess suitability for trail use.

Finally, dedicated funding sources must be provided through the passage of state initiatives, such as the Community Preservation Act and Open Space Bond Bills, federal assistance from the Land and Water Conservation Fund and Transportation Equity Act for the 21st Century (TEA 21, formerly known ISTEA), or through a combination of dedicated user fees and tax revenues.

3. Maintenance and Management

One of the most pressing issues facing trail providers, particularly in the public sector, is the need for improved maintenance of existing and proposed greenways and trails. Even the best trail and greenway designs need ongoing, regular maintenance. This need has become especially urgent in the face of increasing numbers of users.

A higher priority must be placed on the ongoing maintenance of trails and greenways by encouraging expanded partnerships with volunteer organizations and support groups. In addition, training workshops should be held for volunteer groups, and a handbook of standards developed.

4. Education

As a result of the broad definition and uses of greenways and trails there is a need to improve the availability and exchange of information. Organizations working on developing greenways and trails, especially at the grassroots level, need to be educated on funding sources and planning strategies. The public needs information on the locations of greenways and trails, as well as interpretive material on the value of these resources and responsible use.

Consistent contact between local, regional and state agencies and boards should be promoted and information distributed through coordinating organizations such as the Massachusetts Federation of Planning Boards. Local and regional greenway and trail guides, newsletters, workdays, conferences and other events should be developed by organizations such as the Massachusetts Recreation Trails Advisory Board, Massachusetts Greenways and Trails Council and the Massachusetts Office of Travel and Tourism.

Subcommittee on Water Resources

Water resources in this report include all coastal or upland surface or ground water. Rivers, lakes, stream, ponds, aquifers, and wetlands are among the resources under discussion. Additional wetlands information can be found in the wetlands report.

Management of water resources in Massachusetts has changed dramatically in the last 50 years, as knowledge of hydrology, pollution sources, water chemistry, and hydrogeology has increased. We now understand more completely the damage caused by using our lakes, streams and rivers as dumping grounds for municipal and industrial wastes, and have begun to implement preventative measures to address this problem. Massachusetts' residents place a high value on clean water for recreation, environmental and health purposes, as evidenced by strong enforcement of Federal and state laws, and passage of significant state protective measures such as the Wetlands Protection Act and Scenic Rivers Protection Act.

1. Planning and Protection

Thoughtful long-range planning is needed to identify the major issues and obstacles that must be addressed, protect the quality and quantity of water and maintain the integrity of the surrounding landscape. Massachusetts has a diverse planning and protection framework made up of a number of federal, state, regional, local, and volunteer agencies and organizations. Conservation of Massachusetts' water resources requires integrated efforts by these agencies and organizations. Steady progress has been made but more work remains to be done.

State river protection laws should be strengthened by providing for assessments through MEPA, ensuring minimal impacts by state agency actions, improving land use policies on land abutting river corridors, and changing state grant programs for combined sewer overflows (CSO) to target areas with high recreation value most often impacted by CSO's. Local river protection measures and recreation use of these resources should be studied to determine if a correlation exists between the level of protection and the level of use.

It is also recommended that the effectiveness of GIS as a planning tool be studied, GIS training provided, and GIS projects promoted. Furthermore, data should be consistently updated and incorporated into open space and recreation planning. Finally, the effectiveness of a watershed level approach to recreation planning and education should be examined.

2. Education and Outreach

Water resources with potential recreation use are sometimes inaccessible due to the long-held opinion among some landowners and managers that recreation use has an adverse impact on the resource. Owners and managers of the Commonwealth's water resources need to be educated about the actual, rather than perceived, impacts of recreation on resources. Of equal importance is the education of recreation users. Inappropriate conduct on the part of user groups can result in damage to resources and limitations or exclusions on use for all users. Education programs for users must focus on proper stewardship, understanding and cooperation among user groups, and cooperation with resource managers. Water resource policies, such as limitations around public drinking water supplies and streamflow guidelines, should be examined.

The impact of recreation use on public drinking water supplies should be evaluated by determining current allowable recreation use, evaluating demand for recreation opportunities, promoting trial studies on expanded recreation access, issuing new guidelines for use of public water supply areas, and encouraging expanded access on private supply areas. In examining streamflow guidelines, existing guidelines should be identified, recreation demand evaluated, and streamflow guidelines adjusted, to enhance recreation use while protecting other resource functions.

3. Stewardship

The goal of good stewardship is the protection of the resources. For water resources, this means protection of both the water body itself and the watershed lands, particularly those lands abutting a water body or tributary. Stewardship ensures conservation of plant and wildlife habitat, clean drinking water and aesthetic values while ensuring recreation access.

Good stewardship is particularly important in protecting plant and wildlife habitat. The impacts of water-based recreation on significant wildlife habitat should be evaluated and new regulations promoted to balance use with habitat protection. This goal can be achieved by identifying existing wildlife habitats and recreation use and the impacts of these uses on the plant and animal communities, and by adjusting regulations to permit only those recreation uses with minimal impact on sensitive habitats. The popularity of recreation fishing in Massachusetts is also recognized, and it is recommended that opportunities be expanded through promotion of catch and release programs and education of the angler community. Finally, the subcommittee recommends protecting shellfish resources by promoting pollution reduction programs.

4. Access

Access to water resources is typically controlled by towns through "Residents Only" policies, particularly in coastal areas. At the state level, the Public Access Board (PAB) is the authority primarily responsible for inventory and promotion of public access sites, presently managing 160 access sites statewide. While these sites have recently been mapped at MassGIS, little advertising is done to inform the public where these sites are located and what type of access is allowed. A booklet entitled *Public Access to the Waters of Massachusetts* was recently updated, identifying 200 access points across the Commonwealth. This publication should continue to be updated and widely distributed. The majority of the current Public Access Board sites are designed for relatively high-impact recreation users (e.g. powerboats on trailers). The number and distribution of sites designed for low-impact users (e.g. car-top, hand-carried boats) should be expanded, especially on smaller rivers. The PAB should take into account access to a resource as well as access along a resource during the designation process. For example, access along a stretch of beach is significant only if there is also access on to that stretch of beach.

Education programs should be developed to demonstrate how different water-based recreation uses impact each other, promote outreach by regulatory agencies to educate users on water policies, and involve constituency groups in writing regulations and conducting research. The public should also be educated on their legal right to access at public sites, as well as the need to improve access to funding assistance for acquisition and enhancement of public access sites.

5. Funding

Funding is, of course, the cornerstone of most protection, planning, and programming efforts. Gradual tightening of budgetary belts has resulted in the need for innovative approaches to acquisition and enhancement. Water resource agencies and programs have learned to do more with less, and often minor funding opportunities can have significant impacts. Existing funding assistance must be maintained or increased, and new opportunities - regardless of the availability of public funds - created whenever possible, especially through partnerships.

Existing programs such as the DFWELE Riverways Small Grants, DEM Greenways Small Grants Program, DEM Clean Lakes Grants, and EOEA Wetland Restoration Program should be continued or expanded. In addition, citizen access to grant programs should be improved, through bulletins and training sessions and through assistance provided by the federal Transportation Equity Act for the 21st Century (TEA 21).

Subcommittee on Urban Conservation and Public Recreation

Urban recreation plays a critical role in Massachusetts due to the large concentrations of state residents in urban areas. Providing adequate recreation opportunity to a large number of people in a limited geographic area is the central challenge the urban planning community faces. Urban centers can meet many, but not all, of the recreation needs of its residents. Therefore, recreation planners need to consider ways to improve access to resources outside of the urban environment.

1. Fiscal Stability

The capital and operating budgets of government agencies are subject to sharp fluctuations. If budgets are tight, officials look at what they consider to be the most expendable items for budget reductions. Unfortunately, parks, open space and recreation areas are too often seen as expendable items. In reality, parks, open spaces and recreation areas are the cornerstones of healthy, sustainable economies. Numerous studies such as those conducted by the National Park Service and American Farmland Trust have demonstrated the benefits and relatively low cost of open space to local communities. Surveys, such as the 1995 demand survey conducted for SCORP, have consistently shown a high level of public support for continued investment in open space and recreation land, particularly in urban areas.

State funding for programs such as the Self-Help and Urban Self-Help programs should continue. Federal funding through the Land and Water Conservation Fund and Urban Preservation and Recreation Recovery program should be reinstated and expanded beyond recent funding levels. Public advocacy for these programs should be promoted through the creation of a statewide coalition of local greenspace groups.

2. Maintenance of Existing Facilities

While cities in particular need more open space, deterioration in the maintenance of some existing parks and open space diminishes public confidence that new parks will be maintained. In fact, some people might oppose a new park because they foresee its deterioration and a blighting effect on their neighborhood. The Demand Survey makes this point tellingly, in that maintenance and restoration of existing facilities is ranked statewide and in every single region above new acquisition. Maintenance needs to be a primary consideration when parks are designed or rehabilitated, and innovative ways to support adequate maintenance, build community involvement, and support and reduce vandalism and misuse of facilities must be explored and implemented.

The subcommittee recognizes the need for capital funding cycles and supports maintenance of facilities through consistent capital budgeting. Infrastructure condition should be monitored through infrastructure condition surveys, and survey results should be used to establish maintenance priorities. The subcommittee also recognizes the need to upgrade sub-standard playground equipment and improve schoolyard landscapes, and recommends educating recreation agencies on equipment standards and design innovations through conferences and workshops. Recreation agencies should also seek partnerships with professional and community groups to support park maintenance. Finally, the subcommittee recommends

that models for volunteer-based street tree inventories be developed and aggressive tree maintenance programs supported.

3. Acquisition

While infill development in the cities and suburbs is encouraged as a growth management policy, this infill development continues to encroach on the remaining open space. The purchase of property and development rights in urban areas becomes increasingly important to urban residents. Limited urban open space can result in high prices for existing properties and discourage financially limited municipalities from acquiring these sites for recreation purposes. Therefore, alternative ways of providing urban open space must be explored, including conversion of vacant lots to park and recreation spaces. Alternative ways of purchasing and managing open space in urban areas, particularly through coordination with private development entities, must be found.

Open space concerns must be carefully considered in local land use decision-making. For example, cities should prevent conversion of parkland to other uses; or when conversion is unavoidable, require one-to-one or greater replacement of lost acreage. The subcommittee recognizes the need for alternative methods of land protection and recommends improving the understanding of acquisition opportunities through federal TEA 21 funds, use of public benefit packages and mitigation measures in urban development projects, promoting partnerships with private development interests, maintenance groups and programming partners, and formation of urban land trusts.

4. Responsive Programming

Shifting demographics and recreation demand require flexibility in designing and programming facilities and activities. In this era of downsizing and user fee-driven programming, communities that lack sufficient funds are less able to offer free or affordable programs, thereby excluding interested individuals and groups. The diversity of urban populations and the complexity of their demands further complicate delivery of recreation services. The importance of urban park and recreation programs must be demonstrated to support funding for critical programs.

The needs of demographic groups should be identified through surveys and outreach to community groups and service agencies. Programming should be available year-round, including winter sports, passive recreation opportunities for the elderly, skill development programs, and recreation opportunities for individuals unable to participate, or uninterested, in group activities.

5. Equal Access

Access is a critical issue for the residents of urban areas. Parks, open spaces and recreation areas serve numerous valuable functions and possess intrinsic value, but at the same time public support is built through experiences with the resources, i.e., through adequate access. Lack of access can occur because of physical, economic or cultural barriers. Physical barriers include lack of adaptations for people with physical limitations, unsafe equipment, and lack of security and remote locations. Economic barriers include ever-increasing user fees or a lack of mobility due to the cost of car ownership, the cost or limited availability of public transportation, or both. Cultural barriers include language issues and racial and ethnic discrimination. Low and moderate income urban residents are often confronted by more than one of these barriers.

Interpretive programs should be developed to identify the cultural, historic and natural resource significance of urban park systems. To increase access, alternatives to user-fee policies should be considered, particularly for transportation access, and programming and education efforts should be multi-lingual and take advantage of universal symbolization. It is also important to avoid conflicts among users, particularly racial conflicts, and it is recommended that educational outreach be provided to park neighborhoods and user groups.

6. Environmental Protection and Naturalizing the Urban Community

In the past, environmental concerns and the protection of natural areas in urban communities have been treated as low priority, too difficult or in conflict with the need for economic development. This attitude is changing, however, as people recognize that suburban and urban populations share the same basic needs. In addition, a broader analysis of the costs and benefits of economic development indicates that environmental protection should be a cornerstone of urban development to ensure long-term benefits such as energy conservation, soil conservation, drainage, and community service cost savings, and to minimize future mitigation costs.

Parks, open space, and the opportunities for recreation are social goods and should be provided for all residents, particularly those in regions that are heavily populated. As Frederick Law Olmsted commented over one hundred years ago, “urban dwellers need the quiet respite of natural areas to balance the noisy, hectic pace of every day urban life.”

A new model of urban development should be created to coordinate progress in architecture and urban design with efforts to provide cleaner water, greener streets and parks, and maintenance or restoration of natural communities. This model can be achieved in part by adopting strict resource protection and restoration guidelines for urban park systems, promoting use of native plants in landscaping, developing recycling and composting programs in municipal park systems, and supporting street tree management programs.

7. Career Development for Urban Youth

Young people in urban areas should be made aware of career opportunities in open space and recreation. It is essential that a new generation of professionals be developed who are intimately acquainted with the recreation and open space needs of urban populations. We need to find ways to encourage youth from all racial and ethnic backgrounds to visit open spaces and parks, to realize the value of resource protection and the value of an education in natural resources. In addition, we need to identify barriers to employment and encourage young people to choose natural resource and recreation management as a career. Inclusion of urban youth in career development programs for open space and recreation management will result in greater input on policy and program decisions and will lead to a higher level of respect for these programs within the urban community. As the demographic mix of Massachusetts changes, open space programming must be similarly adapted, or else it will be under-utilized and ultimately threatened by public disinterest.

Outreach programs should be created that illustrate career opportunities in natural resources and recreation management. These programs should be targeted to youth through the urban school system. Summer job and internship opportunities with strong skill building and natural resource appreciation elements should also be made available to urban youth. These positions should be filled with students demonstrating a sincere interest in resource management careers.

8. Transportation

Many of the Commonwealth's open space resources are located outside of urban areas and beyond the reach of public transportation. Thus, the act of enjoying the natural environment is dependent on using air-polluting automobiles and results in the destruction of open space acreage for parking lots and highway widening. Those populations most dependent on public transportation, low income residents who can not afford private transportation, often do not have access to recreation areas.

The subcommittee recommends that transportation agencies extend train and bus service from urban communities to outlying open space and recreation facilities, and that transportation to sites within the urban core be improved. Transportation agencies should work in partnership with environmental agencies and advocacy groups to increase the availability of information on recreation and open space locations. When public transportation agencies cannot improve access for urban residents, Federal, state, and local recreation and conservation agencies should provide subsidized transportation to major park and open space sites outside urban areas.

Subcommittee on Cultural and Historic Resources

Article 97 of the Articles of Amendment to the Massachusetts Constitution guarantees the right of the people of the Commonwealth to the historic qualities of their environment. Cultural and historic resources include buildings, structures, objects, areas, burial grounds, landscapes and archaeological sites and represent a valuable material record of the history of Massachusetts. These resources enhance and enrich the quality of life in the state. The experience of the historic landscapes of the state's cities, towns and countryside contributes to the enjoyment, appreciation and understanding of Massachusetts by both residents and visitors. Historic buildings and sites rank high among the destinations of choice for tourists and recreation users.

People have shaped and modified the Massachusetts landscape for over 10,000 years, and the evidence of this long history of human activity is apparent everywhere. Cultural resources define the scene as one drives along ancient roadways viewing historic farms, or walks the streets of old city and town neighborhoods. The historic built environment, with all its characteristic shapes, textures and arrangements of buildings, yards and villages, helps to define what is unique about Massachusetts.

Historic properties enhance the scenic qualities of the landscape and help to define community character. They give a sense of time and of connection to the past and to the present experience of a place. The historic landscape itself is a cultural resource, as represented in the designed grounds of a country estate, the manicured green of a town common, a hilltop orchard, or a lowland cranberry bog. From the high-rise studded skyline of our urban centers, to the industrial triple-decker milltown, to the rolling fields, farms, and forests of our rural communities, Massachusetts is made up of collections of interrelated historic places and spaces where people live, work and play.

As cultural resources, the historic properties and sites in Massachusetts are both finite and non-renewable. Once destroyed, they are lost forever. Their continued value and use as amenities is therefore inextricably linked to the need to preserve and protect them. Because of this, Massachusetts has a well-established programmatic framework that incorporates historic preservation planning into the state's overall planning process at all levels - federal, state and local.

1. Heritage Tourism and Outdoor Recreation

The heritage tourism concept recognizes the potential of historic resources not only as public recreation amenities, but also as economic assets around which local and regional economies can be sustained and revitalized. Heritage tourism links the preservation of historic properties and sites to both recreation and economic benefits. Massachusetts has a well-established array of major historic attractions in both public and private ownership. Cooperative efforts among public and private groups need both to sustain successful visitation areas and promote broader programs of regional heritage tourism and recreation activity.

Key components of the heritage tourism concept are the need for: funds to help maintain and restore historic buildings and sites; interpretation of historic properties for visitors; physical access to sites in compliance with the Americans with Disabilities Act; and integrated efforts to promote knowledge of the location and availability of historic properties and sites for visitation.

These efforts can only be successful with continued protection of the historic landscape through comprehensive statewide, regional and local planning policies that recognize the preservation of historic resources, and enhancement of the overall environment, is vital to the economic health and the quality of life in Massachusetts.

The subcommittee recommends that the Executive Office of Environmental Affairs (EOEA), Massachusetts Historic Commission, and the Massachusetts Office of Travel and Tourism (MOTT) hold regional workshops for historic site operators to help create regional heritage tourism networks. EOEA should also work with MOTT and the Massachusetts Highway Department (MHD) to improve access to heritage recreation sites through a program that integrates signage, maps and literature, guide books and online databases. EOEA, MOTT, and MHD should also use the State Heritage Park system as tourism and recreation information centers, and assure that all state open space and recreation facilities are listed on highway maps and tourism literature.

2. Partnerships

The protection of historic properties and sites is by necessity a collaborative effort. Historic resources fall under a variety of public and private jurisdictions and ownership. Forming partnerships makes sense, both for planning efforts and for developing preservation funding mechanisms. Given continued constraints on staffing and funding at all levels of the public sector, partnerships need to be pursued to achieve shared objectives in the preservation of historic properties and sites. The opportunities for cooperation have steadily multiplied in recent years, particularly at the regional level, where special regional planning organizations have facilitated the creation of partnerships. For example, both the National Park Service's Blackstone River Valley National Heritage Corridor Commission and the Cape Cod Commission have worked to promote regional historic preservation through a variety of planning and funding partnerships.

Matching public grant programs should be used to boost private restoration of significant properties - at the state level through the revival of the Massachusetts Preservation Projects Fund and at the Federal level through TEA 21. Initiatives with the National Park Service should continue to be pursued. Where public funds are lacking, long-term lease programs that ensure restoration and maintenance, such as the DEM Heritage Stewardship Program, can be used to provide incentives for private sector involvement.

Nonprofit historic preservation, conservation, land trust and friends groups are all potential allies and should be part of efforts to maintain, interpret and acquire significant historic resources. The business

community is also a potential partner, particularly through regional chambers of commerce and travel and tourism associations. Finally, the preservation of historic properties and sites by private owners has a significant public benefit. Private owner stewardship must be encouraged through education, incentives and assistance.

3. Public Stewardship

The promotion of heritage tourism and the establishment of a broad array of partnerships help to fulfill the principal responsibility of public owners as stewards of significant historic and archaeological resources in Massachusetts. Historic resources are non-renewable. To fulfill their stewardship mandate for historic properties and sites, state and local governments must integrate historic preservation planning practices into overall recreation planning strategies. While providing adequate funding for staff time and project development should be a priority, where public funds are not available, seeking innovative partnerships in stewardship may prove helpful. Building an active local constituent base for specific historic properties and sites is also critical to preservation efforts. Stewardship means informed decision-making, and must be based on sound historic preservation planning practices.

All historic and archeological resources under public ownership should be identified through phased surveys, and official recognition for significant historic and archeological resources should be obtained through nomination to the National Register of Historic Places. Management strategies for the maintenance, rehabilitation and restoration of these historic properties and sites are established through policy directives and standard procedures that follow the Secretary of Interior's standards for the treatment of historic resources. The subcommittee recommends requiring historic and archeological analysis of candidate parcels and enhancing the weighting of cultural and historic values in land acquisition programs. In addition, we recommend that DEM's Historic Curatorship program be expanded and parallel programs in other agencies developed.

4. Public Education and Interpretation

People want to be educated about historic resources. Moreover, they like to do it in a recreation setting. Interpretation, both in schools and out in the field, is an important goal for outdoor recreation planning. The significance of any historic resource - the story it has to tell - must be understood and appreciated by people in order for its value as a resource to have any meaning. This is in contrast to many natural resources that benefit us even if we are unaware of them. For example, we do not need to know that a woodland is absorbing carbon dioxide and transpiring oxygen in order for us to benefit. But suppose that the woods have historic significance too; they were planted by Johnny Appleseed. Unless we are made aware of this, the historic significance might as well not exist. When people understand, appreciate and enjoy cultural sites and artifacts, they are able to care about them and support their preservation.

Interpretive materials should be developed for all historic properties and sites through capital funding. Interpretive signs should be installed in every state park, with information on the historic aspects of each site. Partnerships should be developed with the Commonwealth Museum to prepare interpretive exhibits. Partnerships should also be developed with nonprofits, schools and advocacy groups to deliver educational programs that use historic resources and sites. Partnerships with research centers and institutions of higher education to further understanding, preservation, and interpretation of historic and archaeological resources are also needed.

Subcommittee on Wetlands

Massachusetts enjoys a natural abundance of wetlands and has a long history of concern for and protection of these resources. Ranging from the salt marsh and estuarine systems of the coastal plain of eastern Massachusetts, to wetland systems associated with the rivers, streams, lakes and ponds of the inland regions, the state possesses approximately 1% of the nation's total wetland land-area (US NRC 1991). Unfortunately, disregard for wetlands has resulted in the loss of at least 28% (approximately 200,000 acres) of the state's wetland resources since colonial settlement (USFWS 1990).

Loss of wetlands in Massachusetts, as is true nationwide, often resulted from a poor understanding of the contributions of wetlands to wildlife protection, flood storage and damage mitigation, water quality protection, and recreation opportunity. Conversion of land for agricultural use was among the earliest causes of wetlands loss, but was eventually overtaken by conversion for residential and commercial development. The greatest losses occurred in the early part of our nation's history. While rates of loss have slowed, Massachusetts, like many states, has a long way to go to achieve a goal of "no net loss of wetlands in the short-term and a net gain in the long-term" as established by the Massachusetts Water

Resources Commission in 1990. Regulatory programs have the capability of slowing wetlands losses greatly, but cannot completely stop them or restore degraded or destroyed wetlands. Non-regulatory programs, such as EOE's Wetlands Restoration Program, must supplement regulatory actions. Wetlands acquisition, especially if coupled with wetlands restoration, is a critical component of a comprehensive non-regulatory approach. The collective and coordinated efforts of the many Federal, state and local agencies and organizations interested in protecting our nation's wetland resources is needed to achieve these goals. Most importantly, the "no net loss" goal cannot be achieved without strong citizen support.

1. Acquisition Priorities

In order to assure continued progress in wetlands protection, the subcommittee recommends that the following wetlands be identified as priority sites for acquisition. These acquisition priorities have been adopted from the priority acquisition plans of the DFELE and the Natural Heritage and Endangered Species Program. In addition, the subcommittee recommends adopting the WBRP list of priority candidates for restoration.

2. Priority Acquisition Sites

Coastal Plain Ponds (sometimes called Kettle Ponds)

Located in southeastern Massachusetts and one of the rarest wetland community types, these ponds are dependent upon groundwater recharge, experiencing no inflow or outflow of water.

Limestone Wetlands (Calcareous Fens)

Found in western Massachusetts, limestone wetlands are characterized by a marble bedrock substrate and highly alkaline waters. These wetlands are home to a number of state-restricted species, such as the shrub birch (*Betula pumila*).

Atlantic White Cedar Swamps

Found in the eastern half of the state, Atlantic white cedar swamps are part of a general category of wetlands that includes bogs and acidic fens. Shielding Atlantic white cedar swamps from groundwater withdrawal and pollution can also protect them.

Vernal Pools

These pools, also called ephemeral pools, can be significant secondary features of acquisition projects. They are critical breeding habitat for a number of species, including state listed rare and endangered species. Although not the focus of acquisition projects, they are critical links in the wetland system and thus important to the health of the whole community under consideration for protection.

Emergent Wetlands

Characterized by vegetation that is rooted in water but emerging above the water surface, such as the cattail marsh.

River and Stream Corridors

Rivers, with their aquatic communities and their riverside communities such as sand bars, marshes and floodplain forests, support a huge component of the state's biodiversity. Natural flooding and flow must be restored wherever possible by removing dams or adjusting water management to accommodate the ecological requirements of rare species and natural communities. Further habitat degradation by dams, intensive bank stabilization, and invasion by non-native species must also be prevented.

3. Priority Restoration Sites

- ◆ Wetlands and former wetlands identified in a Watershed Wetlands Restoration Plan adopted by WRBP.
- ◆ Tidally restricted former salt marshes now dominated by Common Reed or other non-salt marsh plants.
- ◆ Filled former salt marshes.
- ◆ Riparian wetlands and former wetlands within 100 meters of rivers and streams.
- ◆ Wetlands with exceptional potential value for flood storage, shoreline stabilization, wildlife habitat, or other wetlands functions.
- ◆ Wetlands and former wetlands identified as special, such as: Areas of Critical Environmental Concern, EPA Priority Wetlands, North American Waterfowl Management Plan wetlands, wetlands targeted in local open space plans, Outstanding Resource Waters.

- ◆ Restoration of rare species habitat or rare wetland communities, such as Atlantic white cedar swamps, vernal pools.
- ◆ In addition to the priorities set out above, consideration should be given to wetlands protection and restoration projects on private lands. Over 75% of the nation's remaining wetlands are on private lands, and therefore projects that protect wetlands while providing public recreation opportunities should be given consideration.
- ◆ It should be pointed out that identifying certain wetland communities as priorities does not imply that other wetland communities are insignificant or not in need of protection. To the contrary, all Massachusetts wetlands are considered priority resources for protection, but within that framework certain communities do require special attention.